

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB0000226
Revision No:
1

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Penetrations through "A" class divisions: pipe, duct, trunk, etc penetrations

with type designation(s)
BLÜCHER non-welded penetrations

Issued to
Blücher Metal A/S
VILDBJERG, Denmark

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2017/306,**
item No. MED/3.26b. SOLAS 74 as amended, Regulation II-2/9, IMO MSC.1/Circ.1276 and
IMO 2010 FTP Code

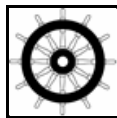
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-03-27.**

Issued at **Høvik** on **2017-05-08**

DNV GL local station:
Aalborg

Approval Engineer:
Tomasz Werchowicz



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Job Id: **344.1-003453-4**
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Product description

“BLÜCHER non-welded penetrations”

Penetration system for Blücher as follows:

Pipe penetration, type 868.900 (Ø 50, 75, 110 mm), composed of steel pipe and steel flange (flange thickness 6 mm), fastened to an aluminium/steel deck/bulkhead with 3-4 sets of bolted arrangement. A SI (Silicone) gasket is fitted in the the penetration flange. The pipe may be fitted with SI (Silicone) sealings.

Drains, types 470.900 and 475.900 (Ø 50, 75, 110 mm), composed of a lower part and/or an upper part and a steel flange (flange thickness 6 mm), fastened to an aluminium/steel deck with 4 sets of bolted arrangement. A SI (Silicone) gasket is fitted in the the penetration flange.

Group penetrations system, type 490, for Blücher pipes and drains or fitted to an approved penetration frame, composed of a 6 mm steel plate (500 x 290 mm) rounded off. The group penetration system is fasten to the steel deck with 8 sets of bolted arrangement. A gasket is fitted between the steel plate and deck.

Group penetration system, type 899 (Ø50-75 mm), for Blücher pipes fitted to an approved penetration frame. The group penetration system is fitted to a steel deck with 4 sets of bolted arrangement. A gasket is fitted between the steel plate and deck.

Pipes, drains and group penetrations are to be insulated with approved insulation (E.g. Paroc Wired Mat 100 or similar) according to drawings mentioned under Type Examination documentation below.

Application/Limitation

Approved for use as in class A-0 to A-60 as follows:

| Type | Deck | Bulkhead |
|---|-------------|------------|
| Pipe 868 (Ø50-110mm) with SI Sealing Approved for use in aluminium/steel divisions | A-0 to A-60 | A0 to A-30 |
| Drain 470 and 475 (Ø50-110mm) Approved for use in aluminium/steel divisions | A-0 to A-60 | N/A |
| Group penetration 490 (500 x 290mm) Approved for use in steel divisions | A-0 to A-60 | N/A |
| Group penetration 899 Approved for use in steel divisions | A-0 to A-30 | N/A |

Other applications are subject to case-by-case approval.

The penetration system is generally not to be used for penetrating boundaries of tanks.

Watertightness and gastightness is not covered in this certificate.

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

Each product is to be supplied with its manual for installation, use and maintenance.

Type Examination documentation

Test reports:

- No. PGA 10030, Serial No. 13214 dated 19th December 2011, (A-0 deck)
- No. PGA 10022, Serial No. 13240 dated 19th December 2011, (A-60 deck)
- No. PGA 11807, Serial No. 11490 dated 23 June 2008, (A-0, A-60 deck)

all from DBI, Denmark.

Assessment reports:

- No. PHA10132 dated 20th March 2012, (Pipe 868 Bulkhead)
- No. PHA10133 dated 20th March 2012, (Group 899 deck)

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- No. PHA10430 dated 2nd December 2013,
all from DBI, Denmark.

Drawings:

- No. S-0429-300, 301, 302, 303, 305, 306 Rev. 0, (insulation)
 - No. S-0429-310, 311, 312, 313, 314, 315, 320, 321, 322 Rev. A, (details)
- all from Blücher Metal A/S.

Tests carried out

Tested according to IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, Mark of Conformity and USCG approval number if applicable (see first page).

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Appendix

Additional application/information for watertightness/gastightness (Not part of the Marine Equipment Directive requirement)

Product description

"BLÜCHER non-welded penetrations"

Penetration system for Blücher as follows:

- A) Pipe penetration, type 868.900 (ø 50, 75, 110 mm), composed of steel pipe and steel flange (flange thickness 6 mm), fastened to an aluminium/steel deck/bulkhead with 3-4 sets of bolted arrangement. A SI (Silicone) gasket is fitted in the penetration flange. The pipes are fitted with SI (Silicone) sealings.
- B) Drains, types 470.900 and 475 (ø 50, 75, 110 mm), composed of a lower part and/or an upper part and a steel flange (flange thickness 6 mm), fasten to the aluminium/steel deck with 4 sets of bolted arrangement. A SI (Silicone) gasket is fitted in the penetration flange.
- C) Group penetrations system, type 490, for Blücher pipes and drains or fitted to an approved penetration frame, composed of a 6 mm steel plate (500 x 290 mm) rounded off. The group penetration system is fasten to the steel deck with 8 sets of bolted arrangement. A gasket is fitted between the steel plate and deck.
- D) Group penetration system, type 899 (ø50-75), for Blücher pipes fitted to an approved penetration frame. The group penetration system is fitted to a steel deck with 4 sets of bolted arrangement. A gasket is fitted between the steel plate and deck.

Application/Limitation

The above penetrations systems are approved for the following:

A) pipe penetrations: penetration in aluminium/steel decks/bulkhead limited to a pressure of 1 bar watertightness and 100 mbar gastightness.

B) drains: penetration in aluminium/steel decks limited to a pressure of 1 bar watertightness and 100 mbar gastightness.

C) and D) group penetrations: penetration in steel decks limited to a pressure of 1 bar watertightness and 100 mbar gastightness.

The penetration system is generally not to be used for penetrating boundaries of tanks.

When requested to be used in watertight bulkheads on passenger ships and Special Purpose Ships (SPS), the penetration system has to comply with the requirements given in SOLAS Ch. II-1 Reg. 13.2.3 (2009 issue). Penetrations passing through watertight bulkheads are subject for separate examination and approval by actual flag administration.

Type Approval documentation

Test report No.ABG23308240 dated 17th February 2012 from DNV GL Aalborg.

Tests carried out

Pressure tests with water and air according to Class Programme DNVGL-CP-0165, February 2016.